Supporting Online Material for

4D Imaging of Transient Structures and Morphologies in Ultrafast Electron Microscopy

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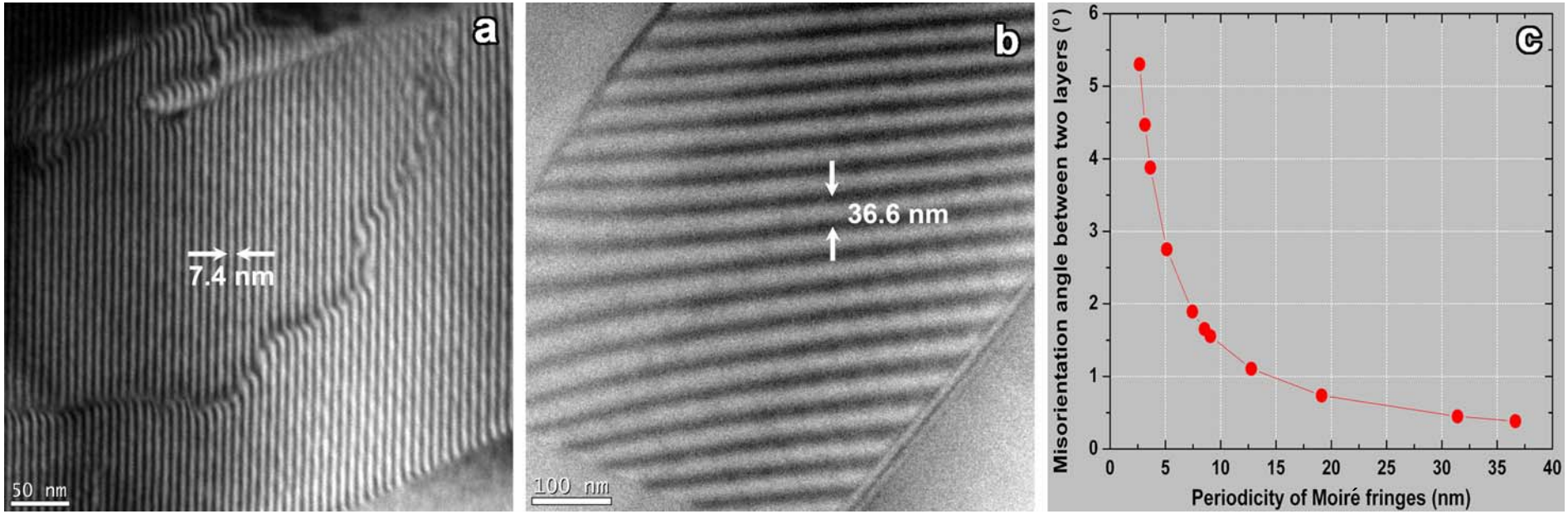
a
7.4 nm
50 nm
b
36.6 nm
100 nm
c
Misorientation angle between two layers (°)
Periodicity of Moiré fringes (nm)
0
1
2
3
4
5
6
0
5
10
15
20
25
30
35
40

Figure S1

Figure S1 Caption: Shown in panels a and b are two representative Moiré fringes of graphite. From all measurements made, the separations were found in our specimen to vary from 2.6 nm to 36.6 nm: the dependence of this separation on the angle between two layers is shown in panel c.

Supporting Material Movie Captions

Movie S1. Full image movie showing the time-dependent morphology evolution following femtosecond heating. The frames used to create this movie include the images depicted in Figs. 2A and B of the text. Here, the movie was slowed down by 10^{10} times because of the ultrafast time recording between frames.

Movie S2. High magnification movie showing the nanoscale changes of the "penguin-like" contour in the local crystal morphology. The frames in this movie include the images depicted in Figs. 2G-K of the text. Here, the movie was slowed down by 10^{10} times because of the ultrafast time recording between frames.